

G120

Cellular 2G or LTE-M / NB-IoT
Optional Iridium Satellite Hybrid

GPS tracking device and Bluetooth® Gateway with optional Iridium Satellite for out-of-coverage tracking with inputs/outputs, RS-232 Interface, and remote immobilization for fleet management, driver ID, driver safety and behavior monitoring, remote worker safety, theft recovery, and more



Real-Time Tracking

High-precision GPS/GLONASS tracking device wired to vehicles or equipment



Backup Battery

Internal Backup Battery in case of loss of power or tampering



Bluetooth Gateway

Bluetooth® 5.0 Gateway for tagged asset management and sensor monitoring



Inputs/Outputs

1 x Analog Input, 6 x Digital Inputs, 2 x Switched Ground Digital Outputs, 1 x Ignition Digital Input, Switched Power Out



RS-232 Interface

RS-232 Interface to connect optional Iridium Edge® Module or interface with controllers and sensors



Driver ID

Configure iButton®, RFID readers and Wiegand Interface for Driver ID



Driver Behavior

Accident and rollover detection, speeding, harsh braking, and more



In-Cab Alerts

Built-in Buzzer for in-cab alerts

Connectivity

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|------------------------|--|
| 2G | 2G: SARA-G350-02S-01 850/900/1800/1900 MHz |
| LTE-M / NB-IoT | uBlox SARA-R410M Modem operates on all major global LTE-M and NB-IoT bands Supported LTE bands: 1*, 2, 3, 4, 5, 8, 12, 13, 18, 19, 20, 26*, 28 (*roaming bands) |
| Bluetooth® 5.0 Gateway | Bluetooth 5.0 gateway reports nearby Bluetooth tags and sensors for affordable tagged asset management and sensor monitoring |
| SIM Size & Access | Internal Micro 3FF SIM |

Location

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|----------------------|---|
| Module | uBlox EVA-M8 |
| Constellation | Concurrent GPS / GLONASS |
| Channels | 72 Channel High Sensitivity Receiver |
| Tracking Sensitivity | -167dBm industry-leading tracking performance |
| GNSS Assistance | GNSS almanac data for greater sensitivity and position accuracy |
| Low Noise Amplifier | GPS signals are boosted by a unique low-noise amplifier (LNA) allowing operation where other units fail |

Power

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| Input Voltage | 8-45V DC (max) |
| Self-Resetting Fuse | Built-in self-resetting fuse makes installation simple and safe. Stringent automotive power "load dump" tests are conducted to ensure operation in the harshest electrical systems. |
| Operating Current | ~25/50mA when moving ~150mA battery charging |
| Sleep Current | <2mA |
| Backup Battery | 1100mAh LiPo internal backup battery pack |

Mechanics / Design

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| Dimensions | 125 x 65 x 30 mm (4.92 x 2.56 x 1.18") |
| Weight | 250 g (8.82 oz) |
| Housing | ABS Polycarbonate Plastic. Non-branded housing for optional white-labeling. |
| Installation | 24 Pin Connector provided as standard |
| Operating Temperature | -30°C to +60°C (connected to external power) At < 0°C and > +40°C the internal backup battery will not be charged as a safety precaution due to the dangers associated with charging batteries at extreme temperatures. |

Mechanics / Design *(continued)*

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| Cellular Antenna | Internal |
| GPS Antenna | Internal |
| RF Antenna | Internal |
| 3-Axis Accelerometer | 3-Axis Accelerometer to detect movement, high G-force events, and more |
| Diagnostic LED | Diagnostic LED indicates operation status |
| Flash Memory | Store weeks of records if device is out of cellular coverage. Storage capacity for over 10 days of continuous 30-second logging |
| Internal Buzzer | Internal buzzer fitted for audible alerts for speeding, harsh driving, driver ID reminders, error conditions, input feedback, and other events |

Interfaces

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| Analog Inputs | 1 x 0-30V Analog Inputs, Auto Ranging, 12-bit ADC 0-5V range: 1.22mV precision 0-30V range: 7.32mV precision |
| Digital Inputs | 6 x digital inputs with configurable pull-up/down 0-48V DC input range On/Off thresholds: Pull-up enabled: low at 0.8V, high at 1.0V Pull-down enabled: low at 2.0V, high at 2.4V |
| Digital Outputs | 2 x Switched Ground Digital Outputs Easily wired up to switch external lights, relays, buzzers, etc Can be used to immobilize a vehicle |
| Ignition | 1 x dedicated ignition digital input 0-48V DC 5V on/off threshold |
| RS-232 | Can be used to connect Iridium Edge® Module or interface with controllers and other sensors |
| Switched Power Out | Outputs are either 5V (external power connected) or Vbatt (no external power) Max Current: 400mA The G120 can provide power to external peripherals, eliminating the need for additional external power supplies |
| TTL Interface | Serial interface used to connect a Digital Matter RFID reader for Driver ID |
| Wiegand | The G120's Wiegand Interface enables easy integration with a variety of RFID card types and readers. Existing employee access badges or IDs can be used with a Wiegand reader for driver ID, permission-based actions, and theft prevention, eliminating the hassle of issuing additional ID cards or fobs. |
| 1-Wire® or iButton® | 1-Wire® or iButton® can be used to read Driver ID tags. Readers available to suit multiple card formats |

Smarts

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|-----------------------------------|--|
| Auto-APN | Auto-APN allows the device to analyze the SIM card and select the correct APN details from a list that is pre-loaded in the device's firmware |
| Accident & Rollover Detection | Configure accident and rollover alerts triggered by extreme changes in velocity and orientation of vehicle or equipment. Second-by-second GPS data is saved on the device's flash memory, with a capacity of approximately 2 hours of data. In the event of an accident, a subset of the data (60 seconds before / 10 seconds after) is uploaded to the server automatically (if configured) or can be requested manually for a detailed reconstruction of the incident. |
| Driver ID Options | RFID, iButton® or Wiegand interface for Driver ID, access control, and logbooking. Wiegand interface supports many third-party readers to read nearly any ID card type. |
| Driver Safety & Behavior | Monitor speeding, harsh acceleration, braking, cornering, idling, and more to improve safety and prevent unnecessary wear on vehicles |
| Geofence Alerts | The server can use device location to create geofences and alerts if an asset enters or leaves designated locations |
| Geofence Download to Device | Geofences can be downloaded directly to the device from Telematics Guru for enhanced location-based actions and alerts. Maximum of 750 Geofences with up to 100 points per geofence. |
| GPS Jamming Detection | GPS Jamming or Interference can be detected and alerted on |
| In-Vehicle Alerts | Can be wired up to external buzzers or lights for in-vehicle alerts |
| Lone Worker Safety | Interface a variety of duress pendants to enable man-down alerts for lone worker safety monitoring |
| Out-of-Cellular-Coverage Tracking | Fit the G120 with an optional Iridium Edge® Module using the RS232 connection to track assets in remote areas outside of cellular coverage |
| Preventative Maintenance | Set reminders based on distance traveled and run hours to reduce maintenance and repair costs |
| Real-Time Tracking | Device remains continuously connected while on the move for real-time asset tracking |
| Remote Worker Safety | Interface a variety of duress pendants to enable man-down alerts for remote (out-of-coverage) worker safety monitoring *Requires Iridium Edge® Module |
| Remote Immobilization | Digital outputs can be connected to a relay to enable remote immobilization of vehicles and equipment in the case of theft, abuse, or unauthorized usage |
| Run Hour Monitoring | Calculate run hours and distance traveled (odometer) to understand and optimize asset utilization |
| Sensor Monitoring | Interface with a range of devices and switches for seatbelt detection, duress and panic buttons, lights, in-cab warning buzzers, and more |
| Tamper Alerts | Instant alert if the device is removed from your asset or disconnected from its power source |
| Theft Recovery | Switch to Recovery Mode in the case of theft or loss to activate real-time tracking for asset retrieval |

Device Management

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| Flexible Configuration | Configure device parameters such as position update rate, movement and accelerometer settings, and more to fit any tracking application |
| Device Management Platform | Manage, monitor, configure, debug, update, and restart devices remotely from our cloud-based device management system |
| Configuration App | Configurable with DMLink provisioning tool |

Integration

Third-Party Integration

TCP Direct or HTTPS Webhook

Security

Data Security

Military-level AES-256 Encryption from device to OEM Server to protect the integrity and confidentiality of telematics data. Data forwarded to third-party systems is sent via HTTPS for end-to-end security.

Warranty

Manufacturer's Warranty

Two-year manufacturer's warranty

Certifications

Please contact us for a full list of compliance specifications and documentation for your region.

LTE-M / NB-IoT - FCC, ISED, Bluetooth® Certified, CE (Doc)
2G - Bluetooth® Certified, CE (Doc)
